ANOTHER HOTEL FIRE.

Burning of the Suwanee Sulphur Springs Hotel in Florida—Two Lives Supposed to be Lost—All the Guests Escape.

JACKSONVILLE, FLA., Jan. 17.

News reached this city this afternoon that the Suwanee Sulphur Springs Hotel, probably the finest structure of the kind in the State, burned at Suwanee, Fla., early this morning. The nearest station is at Live Oak, fully twelve miles from the conflagration, and accessible only by a carriage road. The first news at hand reports that the fire suddenly broke out on the second floor of the building, directly over the kitchen, about 4:30 o'clock this morning. Its origin is a mystery. A strong draft in the halls and high winds on the outside carried the flames along with great rapidity, and the whole building, a magnificent four-sided, five-turreted wooden structure, with a great open square in the center and 125 rooms, was quickly converted into a roaring furnace. Fully 100 guests were asleep in the house when the flames burst forth. Many of them were invalids and nearly all from Northern States. Nearly all the guests were forced to escape by leaping from the windows and verandas, and several suffered broken limbs, but no more serious injuries. A Mr. Palmer, said to be from New York, was badly singed by the flames, but his injuries are not dangerous. A colored servant girl and a negro boy are reported missing, and it is feared that both perished. No search of the ruins has yet been possible. None of the guests saved any of their property, and the loss to the owners of the hotel was also total, nothing but a small fraction of the office furniture being saved. The village possessed no conveniences for coping with such an extensive conflagration, and had other buildings been near the whole town would undoubtedly have been swept away. The hotel and its furniture were valued at $35,000; the insurance aggregates $51,000. The effects of the guests were, of course, uninsured, and their loss is total. A special train was sent from this city to their relief this afternoon.

A COSTLY BLAZE.

Burning of the Montezuma Hotel at Las Vegas Hot Springs, New Mexico—Sixty-two Guests in the House, But all Escape with the Loss of their Effects—Ineffective Fire Service.

LAS VEGAS, N. M., Jan. 17.

The Montezuma Hotel, situated at the springs, six miles from the city of Las Vegas, one of the grandest hoteleries in point of furnishing and surroundings, was completely destroyed by fire to-day. There was no loss of life, but there was of course great excitement among the guests and many narrow escapes to people endeavoring to save their property at the risk of their lives.

The fire was discovered about noon by a servant who was cleaning up one of the reception-rooms on the second floor to the left of the main entrance. He saw smoke coming through the floor near the steam coil. He first ran out into the hall and shouted fire, and then running back into the room, tore the radiator from its place. As he did this, the flames burst through and he had to run for his life.

The fire must have been burning some time, for almost at the same instant fire was discovered by one of the guests, who also shouted fire at the top of his voice.

The panic that ensued was almost indescribable, and most fortunate was it that the fire occurred in the day time and not at night. As it was, the hallways and rooms quickly filled with a dense volume of black smoke that enveloped the entire interior of the building in almost midnight darkness, and the utmost confusion prevailed as the guests and employes rushed madly through the halls and endeavored to drag their trunks and other posessions from their rooms. This confusion lasted for only a short time, owing to the fact that the people were soon all out of the burning building.

The hotel was not half full, there being only sixty-two guests, but there was a full complement of servants and employes. Some of the guests—probably one-fourth—succeeded in saving a portion of their possessions but the employes lost everything.

Of course while all this was going on efforts were being made to stop the progress of the flames. The fire was so rapid that the means of fighting fire provided in the hotel could not be got to work. The fire department of the Springs was unable to do anything to save the hotel. A special train left Las Vegas in ten minutes after the alarm was given with the fire department. The six miles were covered in nine minutes, and the engines ready for action. It was found the plugs were an inch smaller than the city hose, so no effective connection was made for some time. Then the only hope was to save the boiler-house just completed at a cost of $40,000 and bath-house that cost $70,000. The latter's cornice blazed up several times, but was saved. The former escaped only because the building between it and the hotel was torn down.

The Montezuma was first opened for business April 7, 1881, and was considered the equal of any and the superior of most places of public entertainment to be found at any of the popular resorts in America, both on account of the completeness of its appointments and the elegance and taste of its furnishings. The house could comfortably accommodate three hundred guests. The building was of frame, Queen Anne style, three stories high, gable roofed.

There were 250 rooms, all furnished in a costly and elegant style. There were ladies' and gentlemen's reception rooms and general parlors on all the floors, but the principal ladies' parlor was on the second floor. This was furnished on a scale of oriental magnificence. The bridal chambers were elaborately furnished and finished. They were furnished respectively in blue, red and ecru, the latter with dark garnet trimmings. In the upper stories were the sewing rooms. In the basement were the billiard-rooms and bowling alleys, all furnished in native mountain pine. The ladies' billiard parlor was in the cupola of the building. All around the front and sides of the building extended wide balconies.

The fire service was supposed to be perfect, and complete reliance was placed on it. There were stand-pipes and hose-reels on every floor, and it was considered almost impossible for fire to gain any headway in the building. The servants were completely drilled in the use of the apparatus, but all this seems to have been of no avail when the real test came. J. M. Barr, manager, and his wife, recently married, lost all their personal affects. He deserves great credit for his presence of mind and courage.

The loss is estimated at $25,000; insurance, a little over $100,000. The guests, it is estimated, lose $30,000. Everything possible is being done to make them comfortable.

The hotel was the property of the Atchison, Topeka & Santa Fe Railroad Company, and it seems to be considered as a matter of course that it will be rebuilt.

An Expert's View in the Nutt Trial.

PITTSBURG, Jan. 17.

In the Nutt trial to-day Dr. Smith Fuller, the family physician, said Nutt had premeditated the killing of Dukes, and that he had arranged everything for the acceptance of the first opportunity to execute his design. But he had become a monomaniac on the subject. He had brooded so long over the death of his father and the dishonor of his family that when he carried his intention into effect he was an irresponsible agent; had become in fact an absolute lunatic on the question of taking Dukes' life. The killing, was no sudden inspiration: it was the acceptance of a chance to carry out a design relative to a subject on which the prisoner was entirely insane.

WRECKED ON THE RAIL.

Serious Consequences of a Broken Rail on a Texas Road—A Long List of Severe Injuries to the Passengers, Some of Which May Prove Fatal.

FORT WORTH, TEX., Jan. 15.

This morning at two o'clock a west-bound train, running fast to make up for lost time, was within four miles of Millsap, when a rotten cross-tie caused the rail to break. Two coaches and a Pullman were derailed and turned over down an embankment. The air was rent with screams and groans and many were thrown out in an unconscious state. The Pullman and adjoining coach are wedged into each other. None in the Pullman were hurt, but about thirty in the other coach sustained severe injuries. To those unhurt the bleeding heads and bodies of the others were sickening. Some of the wounded were removed to a neighboring house and others carried on the front of the train to Millsap. Physicians were ordered from Weatherford, Millsap and Fort Worth. Seventeen of the victims were brought to the Gould Hospital, only one of whose injuries is regarded as likely to prove fatal—Mrs. Ford of Illinois.

THE VICTIMS.

The list of wounded is as follows as far as obtained:

L. H. Atwell, Columbia, Tenn.; deep scalp wound.

John Ford, head and face cut.

Mrs. O. S. Ford, Ohio, Ill.; fracture of arm and injury to spine.

Mrs. Jennie Hancock, Abilene; nervous prostration and scalp wound.

A. J. Hardin, Terrell; left arm and little finger broken; scalp wound.

Mrs. Hardin; hip and spine injured.

George F. Hall, sprained ankle and shoulder sprained; scalp cut from ear to ear.

Mrs. Hall, shoulder sprained and stiff elbow.

B. J. Williams, Dawson; internal injuries.

R. S. Stratton, Johnson County; injury to spine, scalp wounds.

H. H. Rogers, Fort Worth; scalp cuts and injury to spine.

J. D. Thickmorton, Parker County; shoulder dislocated.

L. B. Wood, Comanche; scalp cuts, internal injuries.

Victor Menenez, New Orleans; nose cut off, three teeth broken and leg bruised.

George McCall, Weatherford; forearm cut and finger broken.

H. E. Bentley, Colorado City; spine injured.

H. B. Stennett, Cotton County; arm broken.

J. M. Stennett, hip sprained.

J. C. Zeins, Abilene; scalp and hand cut.

Mrs. M. J. Gaines, Brown County; scalp and knee cut.

F. S. Gaines, scalp wound.

E. M. Dunbar, Dallas; left ankle sprained.

There was hardly a person in the two coaches that escaped injuries of some kind. The best attention is being paid those at the hospital here. Some continued on the way, while others returned home.

A FIERY RIDE TO DEATH.

A Passenger Train Enveloped in Burning Oil—The Cars Consumed, Three Women Burned to Death and Many Seriously Injured.

BRADFORD, PA., Jan. 15.

A stream of waste oil flowing from a tank across the Bradford, Gordell & Kinzua Railroad caught fire this morning. A passenger train from Wellsville for Bradford ran into it, and the train was immediately enveloped in flames. The track for a distance of one hundred yards was covered with oil. It is believed that gas coming in contact with the fire box of the engine exploded, firing the oil, which spread on the wind, and enveloped the doomed train in an instant in a mass of flames. So intense was the heat that the windows cracked and fell in. In less time than it takes to write it, a passenger coach and baggage-car were converted into a seething, hissing cauldron of fire. It was a terrible moment. The coach was filled. There was a rush for the doors, but the heat was so intense that the panic-stricken passengers were driven back, and forced to jump through the windows, landing in the snow.

A relief train with surgeons and cots was dispatched to the scene. Upon arrival a terrible sight presented itself. The passenger coach and baggage car were smoking ruins. The engine lay on its back, having turned a complete somerset.

THE DEAD.

Mrs. L. C. Pair, of Kinzua Junction, was burned beyond recognition. She was a young woman and had only been married two years. Her husband escaped by jumping through a window.

Miss Katie Moran, Allen's, N. Y., a small station near Aikin, was burned almost to a crisp. Miss Moran was found hanging outside of the coach grasping the window sill.

The third woman burned to death, has not been identified.

INJURED.

Prof. Faught is not expected to live.

Patrick Sexton, engineer, is terribly burned about the face and hands.

Mike Walsh, fireman, was horribly burned about the face and arms.

W. H. Belman, injured internally.

Jerry Denagan, brakeman, han is badly cut.

Charles Heidsche, express messenger, was burned about the hands.

George McCartney, a newsboy, was terribly burned about the head and hands; not expected to live.

A. N. Carpenter, of Little Genesee, face and left hand burned.

Jerry Haggerty, Ceres, N. Y., badly burned about the face and head.

Mrs. Black, daughter and son, of Aikin, N. Y., burned about the head and hands.

Mr. Black was most severely burned.

G. W. Van, wife and son, of Indianapolis, Ind., burned. The boy was badly burned about the face and hands.

John Kafoor, Aikin, N. Y., terribly burned about the face and hands.

An eye-witness of the disaster said: "It was the grandest and yet the most awful scene that human eyes ever witnessed. For a distance of nearly half a mile the roadbed was covered with oil. At points it was over the rails. The moment the gas came in contact with the fire-box it exploded, firing the oil. In less than one minute the engine and cars were enveloped in flames. Great black pillars of smoke ascended heavenward. The driving wheels of the engine, which was dashing along at the rate of fifteen miles an hour, scattered the oil over everything with a rush and roar which might have been heard for a mile. The flames leaped fully 250 feet ahead of the locomotive, which was thus compelled to run through a veritable sea of fire, such as is seldom the fortune of man to witness."

A Fatal Collision.

INDIANAPOLIS, IND., Jan. 15.

A collision occurred in the Big Four of the C., L. and St. L. & C. freight yards this morning, causing the death of Gus Pregnitz, a Big Four car-inspector, the destruction of a caboose and of a car loaded with merchandise. A freight engine had been hauled in and left at the belt. Train No. 12 was rounding the curve in the yards at a five-mile per hour rate when it collided with a caboose which No. 13 was backing. Pregnitz and companion were in the caboose and saw the danger. The former endeavored to effect his escape but was caught in the wreck, his head crushed and leg broken in many places. His companion escaped, although the car in which he sat was smashed to pieces. The engine's pilot and headlight were knocked off, and the damage in dollars will be considerable. Pregnitz had been employed by the company for several years. He leaves a wife and three children. The collision was due to the fact that on the sharp curve neither train could be seen by the other.

THE SCHOOLS OF MISSOURI.

Items of Interest from the Annual Report of the Superintendent of Public Instruction.

JEFFERSON CITY, Jan. 15.

Superintendent Coleman has submitted the thirty-fourth annual report of the public schools of the State of Missouri to the Governor, as required by law. The report shows that decided improvement has been made in the public schools of the State during the last year. A few facts are noticed as proof of the foregoing, viz.:

1. The conservative course of the leading educators has resulted in effectually eliminating many conflicting elements, thereby enabling the friends of education to concentrate their efforts in enlisting the sympathy, gaining the confidence and securing the co-operation of those who have heretofore withheld their approval and support.

2. A more ready acquiescence on the part of the school officers with the manifest requirements of law, which has obviated much unnecessary contention previously occasioned by irregularities in official action.

3. A more urgent demand on the part of the public that the legitimate results of our public school system shall harmonize with the expenditures incurred.

4. A constant call for better teachers; for those who have made teaching a study, a profession; who consider education to mean nothing more than physical development, intellectual training and moral culture—who understand that to educate a child is to make a citizen.

5. A willingness among all classes to vote to extend the school term; to pay better salaries for teachers; to erect more convenient and comfortable school buildings; to supply the schools with improved furniture and necessary apparatus.

The statistics embodied in the report, while approximately correct, are quite unsatisfactory, for many county clerks fail to make correct returns from all the districts, and some fail to make any report whatever. In most cases this arises from the failure of the district clerk to keep a correct record of the official transactions of the board; and Mr. Coleman is of the opinion that this evil will never be eradicated until county supervision is established by law in every county of the State.

In referring to colored schools, Mr. Coleman says: "The prejudice heretofore existing against colored schools and the education of the colored youth, to give them equal advantages with the whites, as the law directs, has, in a great measure, disappeared, and the colored schools are maintained for the same length of terms as the white schools. Sometimes a case arises where the people or board refuse to open a colored school as the law directs, but only a few such cases have been reported to my office. Nearly all the colored schools are taught by colored teachers, and so far as at present known, they are all colored. This plan is less objectionable and works much better than otherwise."

In 1872 the enumeration was from 5 to 21 years of age; in 1882 from 6 to 20 years. The city of St. Louis belonged to the county in 1872 and is classed with it in 1882.

The enumeration for the larger counties, including the cities, shows the number of school children to be:

	1873.	1883.
Buchanan County	12,280	16,496
Jackson County	14,803	28,408
Pettis County	7,471	9,423
St. Louis	122,168	117,038

STATE SCHOOL FUNDS.

The amounts to the credit of the permanent school funds are as follows:

Certificates of indebtedness at six per cent. per annum	$2,909,000 00
Same at five per cent	22,000 00
In treasury	131 65
From revenue of 1884, five per cent	200,000 00
Total	$3,131,131 65
University or seminary fund	496,000 00
Grand total	$3,627,131 65

The $22,000,000 was set apart by the last Legislature, and was made up from the following sources:

Administrators' fund	$ 18,000 00
Road and canal fund	464 99
Notaries' commissions	2,875 00
On hand, 1883	792 66
In treasury to credit of school fund	$ 22,131 65
Certificate of indebtedness	22,000 00
Unappropriated	$ 131 65
State public school fund	$3,131,131 65
State seminary fund	496,000 00

APPROPRIATIONS.

The last General Assembly made appropriations for educational purposes as follows:

One-fourth of revenue	$ 392,242 14
Interest on school fund	174,540 00
State moneys, 1883	5 6,782 74
Estimated for 1884	550,000 00
University (for building)	100,000 00
University, support of	54,840 00
Agricultural College debt	23,000 00
School of Mines, support of	15 000 0
Normal School, Kirksville	20,000 00
Normal School, repairs	15,965 80
Normal school, Warrensburg	20,000 00
Normal School, repairs	15,000 00
Normal School, Cape Girardeau	20,000 00
Normal School, repairs	12,780 00
Lincoln Institute	12,500 00
Repairs for same	3,500 00
Deaf and Dumb Institute	92,500 00
Repairs for same	26,000 00
Blind Asylum	52,000 00
Repairs for same	5,000 00
Increase of school fund	218,462 99
Total appropriation	$1,843,330 93

STATISTICS.

The following report is made by the school commissioners from the various counties, showing the number of children of school age in the State:

White children	719,670
Colored children	43,323
Total	762,993
White children enrolled	487,519
Colored children enrolled	23,820
Total	511,339

The number of teachers employed in the State is 12,077, and the average salary paid per month is $46.61. There are 8,499 school buildings in the State and 264 buildings rented for school purposes. These buildings have a seating capacity of 541,198. The number of white schools in operation is 8,601, and colored schools, 497. The average cost per day for tuition for each child is .066. School property of the State is valued at $9,289,409.95. The amount paid out last year for teachers' wages was $2,543,582.02. School-houses have been erected during the year valued at $442,589.24. The total amount of receipts into the school fund during the year was $4,272,199.98.

Mr. Coleman closes his report by stating that two things must be secured before our system of public schools in Missouri can prove a success:

"1. The employment of the county commissioner for his whole time.

"2. County teachers' institutes established by law, requiring that each county commissioner shall call, organize, conduct, or have conducted, an institute for the term of two, three or four weeks during the summer vacation."

—The longest line of fence in the world will be the wire fence extending from the Indian Territory west across the Texas Panhandle and thirty-five miles into New Mexico. Its course will be in the line of the Canadian River, and its purpose is to stop the drift of the Northern cattle. It is a bold and splendid enterprise, and will pay a large percentage on the investment. The fence will be over two hundred miles long.—*Chicago Herald.*

—Three days' imprisonment was the fate of a man who called to a German Judge to speak louder.

Tennyson as a Money-Maker.

I have heard repeatedly of late that Tennyson would have no means to support his new rank. He should not find it difficult. If he be as unsocial and inhospitable as a Baron as he has been as plain Alfred Tennyson his sustainment of the title need not be expensive. The common opinion that he is only well-to-do is erroneous. For a literary man he is very rich. No author in America has begun to make so much money as he. His poetry has brought him, it is estimated, £80,000 or $400,000 at least, and the sum has been put as high as £100,000 and £120,000. Being a careful—not to say close—manager, he has so invested his earnings as to have a property worth at present £220,000, or $1,000,000. He owns, or did own recently, a house in town, where he spends very little time: he has a beautiful place at Farringford, Isle of Wight, and another country-seat at Aldworth, in Surrey. For a poet he is very practical, driving it is said, very sharp bargains with his publishers, holding out for the last shilling.

No banker or broker in Lombard street conducts his affairs more shrewdly. He has frequently changed his publishers, who, to secure him, are obliged to give him the most generous terms. The firm with which he now deals pays him extraordinary prices for the exclusive right to issue his complete works; but he would demand more if he had any chance of getting it. A publisher who has in the past done much business with him, says he ought to be called Moses Tennyson, and that, if he had not turned poet, he would have made a brilliant pawnbroker.

It is not strange that he attaches great value to his writings, for he takes unwearied and endless pains with them. His is the toil of composition produced by brain sweat. It is an agony of labor which nothing but supreme self-love or superlative literary ambition would enable him to endure. He often spends hours on a single line, and has been known to devote a whole week to one short poem. It is more than fifty-four years since he won the Chancellor's medal at Cambridge for "Timbuctoo," a piece of blank verse, and he has been wreaking himself ever since on expression. In that time he has done work enough to wear out a score of ordinary men; but he has ever been sustained by a robust constitution, abundant exercise, and a degree of vanity that passes all understanding. If genius be, as some declare, unlimited capacity for work, Tennyson is a genius of the highest order. For a generation he has been stimulated by a great reputation, which has not been eclipsed for more than forty years. To this may be added his love of gain: for he is sure of reaping a large recompense on every bit of writing, whatever its quality. — *London Cor. Philadelphia Press.*

Rubini's Home.

The New Orleans *Times-Democrat* translates from Mario's autobiography the following incidents:

It was the morning after my debut at the Italian Theater in the Elisir d'Amore; I was sleeping the deep sleep of a man who went to bed at an awfully late hour, after having experienced a variety of intense emotions. An energetic shout caused me to wake up with a start: "Bravo! Mario! bravissimo!"

And I saw the kind, smiling face of Rubini peeping through the curtains of my bed.

I need hardly say that this great artist, who had honored me with his friendship and gave me his priceless counsel without the least thought of jealousy, could enter my home at any hour whatsoever.

He who was then the public idol at the Italian Theater came with hands extended to press mine, and he uttered these words which made an impression on me never to be forgotten: "It is thou who shalt fill the place of Jean Baptiste Rubini!"

Some years after when I was in London, I heard that Rubini was singing the "Stabat Mater" of Rossini. I rushed to the theater, and as soon as he saw my card, the impressario gave me a place in the first row of orchestra seats. Rubini could not help seeing me. He observed me at once; and as if to greet me, he presumed to make the following maccaronic variation upon the classical text—gazing fixedly at me with his most serious air: Dum fiebat . . . et non payabat!

Luckily nobody in that great audience of prim Englishwomen and keen Englishmen caught that flying allusion to the friend who had not paid for his seat. One crabbed formalist, however, might have made Rubini pay dearly for his dog Latin.

I could not help smiling; thereby greatly scandalizing my neighbors—astounded to find that the music of Rossini and the poignant emotions of the drama of the Passion could excite in me anything approaching to hilarity.

—It is all very well to have a sweetheart who is spiritually minded, says the Indianapolis *Journal*, but the girl who looks into futurity and sees death reaching after her lover is not likely to fill a popular demand. Miss Lemon, of Millersburg, Ohio, was one of this sort. Recently she was stricken with paralysis. Before her death she said farewell to her intended husband, informing him at the same time that he would follow her in a very short time. The young man, who was healthy and robust, and whose appetite seemed not to have been affected by his loss, ate a hearty breakfast the other morning and was soon after stricken with paralysis, precisely as Miss Lemon had been, dying in two hours.

—Albert Cole, watchman at Barnum's winter quarters, Bridgeport, missed his fine gold watch the other day. A great search was had, and everybody disclaimed having seen it. Just then a grand tableau occurred. A monkey had the watch trying to crack a walnut with it. The watch was rescued in a ruined condition. Mr. Cole had hung the watch on a pole while washing his hands, and the monkey had reached through the bars and taken it.—*Hartford Post.*

—Amario Cinalli, an Italian, drank a quart of brandy at Philadelphia on a wager, was taken subsequently with convulsions and died. — *Philadelphia Press.*

Our Young Folks.

THE BISHOP'S VISIT.

Tell you about it? Of course I will!
I thought 'twould be dreadful to have him come,
For mamma said *I* must be quiet and still,
And she put away my whistle and drum—

And made me unharness the parlor chairs,
And packed my cannon and all the rest
Of my noisiest playthings off up-stairs,
On account of this very distinguished guest.

Then every room was turned upside down,
And all the carpets hung out to b'ow;
For when the Bishop is coming to town
The house must be in order, you know.

So out in the kitchen I made my lair,
And started a game of hide-and-seek;
But Bridget refused to have me there,
For the Bishop was coming—to stay a week,

And she must make cookies and cake and pies,
And fill every closet and platter and pan,
Till I thought this Bishop, so great and wise,
Must be an awfully hungry man.

Well! at last he came; and I do declare,
Dear grandpapa, he looked just like you,
With his gentle voice, and his silvery hair,
And eyes with a smile a-shining through.

And whenever he read or talked or prayed,
I understood every single word;
And I wasn't the leastest bit afraid,
Though I never once spoke or stirred;

Till, all of a sudden, he laughed right out
To see me sit quietly listening so;
And began to tell us stories about
Some queer little fellows in Mexico.

And all about Egypt and Spain—and then
He *wasn't* disturbed by a little noise,
But said that the greatest and best of men
Once were rollicking, healthy boys.

And he thinks it is no matter at all
If a little boy runs and jumps and climbs;
And mamma should be willing to let me crawl
Through the banister-rails in the hall sometimes.

And Bridget, sir, made a great mistake,
In stirring up such a bother, you see,
For the Bishop—he didn't care for cake,
And really liked to play games with me.

But though he's so honored in word and act—
(Stoop down, for this is a secret now)—
He couldn't spell Boston! That's a fact!
But whispered to me to tell him how.

—*Mrs. Emma Huntington Nason, in Wide-Awake.*

ABOUT CLOCKS.

Of course, you all know what a clock is, and some of you six-year-olds can tell what time it is by one. And yet many of you ten-year-olds know as much about clocks as the wisest man in Congress—which is simply nothing. Whether it be a spring or weight clock, they all have the same machinery inside; that is, the same number of wheels, though ingenious Yankees have invented clocks that run with a less number of wheels than the standard Meriden or Waterbury clocks. There used to be a story current when I was a boy of Moses Latta, of Cincinnati, who invented the steam fire-engine, how that he took an eight-day clock to pieces, cleaned it, put it together again, had one wheel left, yet it ran as usual, kept time and struck the hours promptly. But there are few Moses Lattas. In the first place there is the main wheel (which is attached directly to the power, be it spring or weight); two face-wheels, one to run the minute-hand, which revolves once around the face every hour, and one to run the hour-hand, which goes from one figure to another each hour; two intermediate wheels as checks upon the power; one escape-wheel—that is, the little one you see through the hole in the center of the face, and which, as it escapes the claw-like verge at the upper end of the pendulum rod, makes the tac, tic noise you hear. On the striking side there are the main-wheel attachment to the power, the count-wheel, the warn and strike-wheel, and the stop-wheel. Did it ever puzzle you how the hammer should strike the correct hour and then stop? And yet the explanation is simple enough. Thus: the count-wheel has seventy-eight little notches and twelve big ones. An arm is attached to the strike-wheel, which is bent square down at the outside end. As the strike-wheel revolves it throws this arm up and lets it drop down exactly when the notch of the count-wheel comes under the hook. Let us begin at one o'clock. When the minute-hand wheel reaches 12 it starts the strike-wheel, that wheel throws up the arm, the wheel moves, the hammer strikes one, the arm then drops into the deep notch and remains there until the minute-wheel describes one more full revolution. Here is an explanation:

Having thus explained the power and the striking apparatus of a clock, let us now inquire how it is that in every twenty-four hours it comes back to the same time of day? The sun varies almost every day in the year, but a good clock never.

What regulates a clock? The pendulum. How? By describing a given arc of a circle in a given time. But some pendulums beat fast and some slow? That is all owing to the size of the wheels. Has the strength of the power anything to do with the velocity of the escape wheel? Nothing whatever. To illustrate: A certain spring has an expansive power of one-tenth, that is, when wound upon a cylinder its recoil would lift one pound. Another spring has an expansive power of one-fifth, or lift of one-fifth of a pound. Apply each of these springs to the same wheels and the same length of pendulum, which would run the fastest? The weakest. Why so? Because the stronger one, through the escapement wheel, would force the pendulum ball to describe the greater arc of the circle, hence traveling further and hence losing time in distance. And yet there are hundreds of watch and clock tinkers who do not understand this simple proposition in physics. So, then, to regulate a clock you lengthen or shorten the pendulum-sweep by raising or lowering the ball. Yet, again, there are thousands of clock-tinkers who can not perform this simple duty. In the first place the clock should be perfectly plumb. This you accomplish by applying the metronome test of the ear. It should say tic as promptly and regularly as it says tac. If the clock is uneven there will be a pronounced difference in time between tic-tac and tac-tic. Then wind the clock so as to run eight hours, and set it by some good watch or other correct time. At the end of every hour notice whether it gains or loses, and screw up or lower the pendulum-ball accordingly, giving the set-screw only half a turn each time. No clock repairer can regulate a clock at full spring, because the power is too irregular. Clocks are made with long pendulums that beat seconds and are used as regulators for railways and other purposes. The train is composed of a certain number of wheels with a certain number of teeth so arranged that the pendulum, in describing an arc, allows one tooth to escape each second. The American watch has eighteen thousand beats to the hour, while the old English watch varies from eight thousand to ten thousand an hour. You will see a pendulum-rod in these big regulators composed of alternate strips of brass and steel with a ball of mercury. These are supposed to counteract the effects of contraction and expansion, as the weather is hot or cold. But there is nothing in it. All the contraction or expansion a pendulum-rod will experience would not affect its time five seconds in twenty-four hours.

When you grow up, children, next to the old family Bible, with the thumb-marks of the dear old mother on *her* familiar page, will come to you in your dreams that other familiar face of the old house clock, and its measured tic, tac will sound on so sweetly, as of yore. May the one that lulls you to sleep now measure out with no sparing hands the joys and years of man's allotted three-score and ten.—"*Phocion,*" *in Chicago Journal.*

*["Phocion's" discoveries of the nature of the pendulum overthrow the theories accepted by the scientific world since the time of Galileo, who is said to have discovered the principal of the equal beat of pendulum of the same length, without reference to the length of the swing.—*ED*]*

Saved from Freezing to Death.

When Bobby Smart was six years old, he was left to the care of his uncle James, who lived in the country. His aunt took him to his future home, and at the depot he saw his uncle for the first time.

Bobby was lonely and sad; his uncle often treated him with harshness and even cruelty. The cold winter had come on early. Bobby was the only boy about the farm, and he had to work very hard. His clothing was unfit for the winter weather, and he often suffered from the cold.

Among the duties which this poor boy had to perform was that of tending a flock of sheep. One afternoon, when there were signs of a snow-storm, he was sent to drive the flock to the barn. He started for the field, but his clothes were so thin that he was benumbed by the intense cold. He sat down on a large rock to rest himself. He felt strangely tired and cold. In a little while he began to feel drowsy. Then he thought it was so nice and comfortable that he would stay there awhile. In a very few moments he was asleep, and perhaps dreaming.

Suddenly he was aroused by a tremendous blow which sent him spinning from his perch on the rock to the ground. Looking about him, he saw an old ram near by. The creature looked as though he had been doing mischief, and Bobby was no longer at a loss to know where the blow came from; but he thought the attack was an accident, and in a short time he was again in the land of Nod.

Again the ram very rudely tumbled him over into the snow. He was now wide awake, and provoked at the attack of the beast. He began to search for a stick to chastise his enemy. The ram understood his intention, for he turned upon Bobby as if to finish the poor boy. Bobby was forced to take to his heels, and run towards home.

The ram chased him, while the rest of the flock followed after their leader. The inmates of the farm-house were surprised to see Bobby rushing towards the house as fast as his little legs would allow him. His hair was streaming in the wind, and he was very much terrified. Close upon him was the old ram, kicking up his heels in his anger. Behind him could be seen a straggling line of sheep doing their best to keep up.

Bobby won the race, however. His uncle came out in time to turn the flock into the barn. It was a long time before Bobby would venture near the ram again.

Bobby knows now that but for the efforts of that old ram in knocking him from his seat on that bitterly cold day, he would have been among the angels in a very short time. The sleepy feeling which overcame him would have ended in death.

Bobby declares that the ram knew all the time what ailed him, and that he butted him from the rock on purpose. I can not explain it, but do know that "God moves in a mysterious way His wonders to perform."—*Our Little Ones.*

An Old Story Revived.

The *Broad Arrow*, an English paper, reviews the following story, which has been told of many soldiers and nationalities. It says: "Who is the hero of the following true story? A mild but zealous disciplinarian was briskly passing a sentinel, on his way to his official residence, when he turned upon the stalwart guardian and demanded the reason why he did not challenge him. In vain the sentry declared that he knew him to be the ——; he was emphatically told his duty was to challenge every one who approached him, and warming with excitement, the gallant officer exclaimed: 'Challenge all, challenge me, sir!' 'Well, then,' said the sturdy pupil, lowering his rifle and bringing it to the charge, 'I do challenge you. Give the countersign, sir!' and the hasty superior, having in the course of his practical instruction allowed the word to slip his memory, was forthwith made a prisoner and driven into the sentry-box. So situated, the worthy preceptor was soon granted another opportunity of estimating the effects of his teaching. A policeman, passing, demanded why the sentinel had imprisoned the gentleman. 'You foolish fellow,' said he, 'why, it is the ——!' But the only reply from the sentry was the vociferous demand: 'Give the countersign!' The policeman, deeming his uniform to be a sufficient authority for passing the sentry, had also forgotten to learn the word, and he, too, was ordered into the sentry-box, from which he and his distinguished fellow-prisoner were rescued only when the sentry was relieved."